

results from exhaustion of the inhibitory centres, by which the impulsion centres become hyperæsthetic. The later involvement of the latter reduces the excitability. The same explanation may be given for the exaltation of excitability from the primary action of narcotics.—Rosenthal, *Centralblatt*, No. 17.

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NERVE-STRETCHING AND PRESSURE (*Arch. f. Physiologie*, 2 u. 3 H.).—Experiments to determine the strain which the sciatic nerve of the frog will sustain have been made by Zederbaum under Prof. Kronecker's direction. They found that motor excitability was somewhat exalted by stretching the nerve at right angles under a weight of 75 to 500 grammes; was diminished when 500 to 900 grammes were applied, and from 1,000 grammes a decided reduction followed. In one case excitability remained after the application of 1,700 grammes. On the other hand, the reflex excitability was not retained under a strain of more than 400. The conclusion is drawn, that, with otherwise intact centrifugal conduction in consequence of the strain, the only motor conduction which is arrested consists of such excitations as proceed from reflex excitation of the cord, while direct motor and sensory conduction is preserved. The nerves of rabbits sustain pressure less than those of frogs. Unilateral section of the cord had no effect on the phenomena above described.—Obersteiner, *Centralblatt*, No. 17.

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TROPHIC NERVES.—A very elaborate contribution to this subject, of a purely experimental kind, by Lewaschew, of St. Petersburg, working under Prof. Botkin, appears to confirm the growing belief that the nutritive changes which follow nervous lesions are referable to vascular disturbances (*Cent. f. d. med. W.*, 1883, p. 193). In one most important respect Lewaschew's conclusion is different from previous views: he holds that the dilatation of the vessels and associated phenomena consequent on nervous lesions, and frequently the precursors of "trophic" changes in the tissues, are due to irritation of the vaso-dilator nerves, and not to paralysis of the vaso-motor nerves. Lewaschew's investigations consisted in irritating the sciatic nerve in dogs by means of thread steeped in weak acids or salt, and then noting the phenomena that ensued in the limb, as well as making careful post-mortem examinations of all the parts involved. Contraction of the vessels of the limb was rarely the result of this operation on the sciatic, and when this result was obtained, no trophic changes ensued. Generally the very opposite condition of circulation was produced; the vessels dilated and pulsated, the limb swelled, the temperature rose, and all in the course of a few days. These phenomena would persist for several months, and then disappear rather quickly, but meanwhile more permanent changes were taking place. The soft parts round the nails were swollen and ulcerated, the epidermis of the sole thickened, the bones became enlarged, the

electrical condition of the muscles was altered. Ultimately the limb generally became atrophied, with diminished temperature; the skin and some of the muscles were reduced in volume; the subcutaneous tissues were sclerosed and white, and the blood-vessels presented contractions and dilatations of their lumen. Microscopical examination confirmed the observation of primary vascular dilatation and secondary sclerosis around the vessels. In some of the experiments excess of irritation caused muscular paralysis of the limb, complicating, but practically confirming, the observation. The absence of paralysis and anæsthesia in the best cases suggested the absence of vaso-motor paralysis, and the presence of vaso-dilator irritation. The variety of results obtained confirmed this view, as well as the rapidity of their development and the degree to which they advanced.—Dr. J. M. Bruce, *Brain*, part xxii.

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HERPES.—Nieden has described a remarkable case of recurrent herpes in the region of the ophthalmic division of the left trigeminus after lesion of the cervical spine. A man who had sustained an injury in the neighborhood of the superior cervical ganglion, and who for the next six years had suffered from severe attacks of cephalalgia and ciliary neuralgia, became subject to eruptions of herpes in connection with the left eye. The cornea and the skin, corresponding to the supra-orbital and supra-trochlear nerves, were the seats of the herpes, whilst the nasal area was spared. During the next six years the eruption recurred four times, and, as in the first attack, it was always accompanied by paresis of the vessels of the left half of the face, periodical headache, hyperæsthesia of the skin, and palpitation of the heart. No doubt the left cervical sympathetic was paralyzed, with consequent neurosis of the first division of the trigeminus.—Dr. J. M. Bruce, *Brain*, part xxii.

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CONTUSIONS OF THE BRAIN AND SPINAL CORD.—An extensive article, with numerous cases illustrative of the above subject from the pen of Dr. John A. Liddell, appears in the *American Journal of Medical Sciences* for July. The author says: (1) Whenever contusion of the brain is produced the lesion of the brain substance is usually found either directly underneath the scalp-wound, *i. e.*, directly underneath the external point of impact, or on exactly the opposite side of the encephalon. The latter often occurs, and is truly said to be caused by the *contre-coup*. (2) Bruises of the cortical portion of the brain and pia mater, when exposed to view, oftentimes do not differ much in appearance from bruises of the subcutaneous connective tissue, for both injuries alike are attended by ecchymosis. In numerous instances, however, there is much more copious extravasation of blood in cases of cerebral contusion than that which occurs in ordinary ecchymosis, and not unfrequently this extravasation proceeds so far as to cause death,